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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,392	11/19/2003	Eric Godard	245502US41XCONT	5498
22850	7590	11/04/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEE, BENJAMIN C	
			ART UNIT	PAPER NUMBER
			2632	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/715,392

Applicant(s)

GODARD ET AL.

Examiner

Benjamin C. Lee

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/261,484.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/19/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ching et al. (US pat. #5,808,563).

- 1) In considering claims 10 & 13:

Ching et al. discloses a method for displaying multiple-parameter flight information for aiding the piloting of an aircraft, comprising: the claimed displaying a speed vector as a first characteristic sign (50) of the aircraft on a display (31) of the aircraft, and that such aircraft displays can include a head-up display (Abstract and 4 of Fig. 1); determining a margin of maneuver (indicated by sign 51) of the aircraft in the form of maximum permissible deviation values for the current speed vector (Fig. 4); and displaying the margin of maneuver as a second characteristic sign (51) concurrently with speed vector (50) on the display, and that such aircraft displays can include a head-up display (Abstract and 4 of Fig. 1).

Since the maximum permissible deviation values 51 for the speed vector 50 as shown in Fig. 4 are in the context of aircraft flight modes/procedures such as take-off and landing in which a “go around” procedure is warranted if and when a maximum permissible deviation value is reached (col. 3, lines 19-67), it would have been obvious to one of ordinary skill in the art at the

time of the claimed invention that at least one of a speed and angle of incidence of the aircraft would effect such maximum permissible deviation values for a particular speed vector in a determinable manner, and therefore to determine the margin of maneuver of the aircraft based on the at least one of a speed and angle of incidence of the aircraft.

2) In considering claim 12, Ching et al. made obvious all of the claimed subject matter as in claim 10, wherein:

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention that the maximum permissible deviations 51 for the speed vector 50 in the longitudinal direction in Fig. 4 of Ching et al. comprises top and bottom portions of the displayed margin of maneuver, which are related to pitch-up and pitch-down maneuvers; respectively, in that a pitch-up or a pitch-down maneuver would result in movement of the speed vector sign 50 towards the top portion or bottom portion of the maximum permissible deviation sign 51, respectively.

3) In considering claim 14, Ching et al. made obvious all of the claimed subject matter as in claim 13, including:

--the claimed wherein a distance between the first and second characteristic signs is proportional to the determined margin of maneuver (Fig. 4).

4) In considering claim 15, Ching et al. made obvious all of the claimed subject matter as in claim 13, except:

--specifying the claimed said second characteristic sign is presented on the screen only if the longitudinal margin of maneuver is less than a predetermined value.

However, it has long been recognized to reduce pilot information sensory overload and display information clutter by eliminating unnecessary display information until such

Art Unit: 2632

information is required for safety and effectiveness of the display, and since the purpose of the margin of maneuver sign (second characteristic sign) in Ching et al. was to provide visual feedback for the aircrew to control the aircraft in order to avoid disasters, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to present said second characteristic sign on the screen in a system such as taught by Ching et al. only when near the maximum permissible deviation value points by determining if the margin of maneuver is less than a predetermined value as a way to reduce pilot information sensory overload/display clutter and improve safety and display effectiveness.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ching et al. in view of Kelly et al. (US pat. #4,910,513).

1) In considering claim 11, Ching et al. made obvious all of the claimed subject matter as in claim 10, while:

Kelly et al. discloses in a similar multiple parameter display system determining (Fig. 3) a SEPARATE margin of maneuver (indicated by sign 40) of the aircraft determined as a load factor (col. 5, lines 57-68 and Fig. 1-5 which disclose that the sign 40 varies linearly with, or determined as, load factor and is related to pitch maneuvers pertaining to stall warning according to Figs. 1-2; col. 4, lines 33-64; col. 5, lines 10-56; col. 7, line 67 to col. 8, line 1); and displaying the separate margin of maneuver as a characteristic sign (40) concurrently with other flight information on the display screen (Figs. 1-2).

In view of the teachings by Ching et al. and Kelly et al. which both teaches the display of multiple pilot aid parameters on the same display screen, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include the displaying of a margin

Art Unit: 2632

of maneuver characteristic sign taught by Kelly et al. in the head-up display screen of Ching et al. concurrently on the same screen, in order to provide the pilot with the both speed vector and associated deviation limits information, as well as the separate margin of maneuver associated with pitch limits for enhanced aid to the pilot by virtue of awareness of the combined or added information presentation to the pilot.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 4-12 of copending Application No. 10/261,484. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially the same, with the exception of obvious minor variations, for example, a "head-up display" in place of a generic "display".

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


US Patent Nos. 6169496, 5248968, 5912627, 6062513, 5127608, 5003305, 4924401, 4764872, 4590475, 5595357, 6169496, 6271769, 4457479, 6246929

--Similar calculation and/or indication of stall condition for aircraft.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin C. Lee whose telephone number is (571) 272-2963. The examiner can normally be reached on Mon -Fri 11:00Am-7:30Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Benjamin C. Lee  
Primary Examiner  
Art Unit 2632

B.L.